

IN THE CLAIMS

Please amend claims 1, 12, 16, 34, 35, 38, 42 and 48, and cancel claims 13-15, 31-33, 36-37, and 39-41. The pending claims therefore are believed to be as follows:

1. (Currently Amended) A device for augmenting the nucleus of an intervertebral disc, repairing or replacing an intervertebral disc, or any portion thereof, said device comprising ~~at least one piece of natural tissue sized and configured for insertion within an intervertebral disc~~ a length of natural tissue sized for introduction into an intervertebral disc nucleus space, wherein said length of natural tissue has a first, straightened configuration and a second, folded configuration, wherein said first, straightened configuration presents a first cross-sectional size and said second, folded configuration presents a second cross-sectional size, wherein said first cross-sectional size is smaller than said second cross-sectional size; wherein said device additionally comprises a drawstring effective for folding said length of natural tissue to its second, folded configuration after implantation of the tissue in a disc nucleus space.

2. (Original) The device of claim 1 wherein the natural tissue comprises a biological tissue or a matrix derived from a biological tissue.

3. (Original) The device of claim 1 wherein the natural tissue comprises pericardium tissue.

4. (Original) The device of claim 1 wherein the natural tissue comprises small intestine submucosa.

5. (Withdrawn) The device of claim 1 wherein the configuration comprises a plurality of layers of the natural tissue.

6. (Withdrawn) The device of claim 5 wherein the plurality of layers have a form selected from the group consisting of a roll, a plurality of stacked sheets, and a folded-over single sheet.

7. (Withdrawn) The device of claim 5 wherein the device further comprises a securement mechanism for affixing together at least a portion of at least two of the plurality of layers.

8. (Withdrawn) The device of claim 7 wherein the securement mechanism comprises a mechanism selected from the group consisting of a suture, a staple, etc.

9. (Withdrawn) The device of claim 1 wherein the natural tissue comprises a plurality of sub-units.

10. (Withdrawn) The device of claim 9, and further comprising at least one securement mechanism for movably interconnecting the plurality of sub-units.

11. (Withdrawn) The device of claim 10 wherein the securement mechanism comprises a mechanism selected from the group consisting of a suture, a staple, a sheet, a strip.

12. (Currently Amended) The device of claim 1 wherein said ~~device~~ natural tissue comprises braided natural tissue.

13-15. (Cancelled)

16. (Currently Amended) A method of augmenting the nucleus of an intervertebral disc, ~~repairing or replacing an intervertebral disc, or any portion thereof,~~ said method comprising implanting in the intervertebral disc an intervertebral disc device comprising ~~at least one piece of natural tissue sized and configured for insertion within an intervertebral disc~~ a length of natural tissue sized for introduction into an intervertebral

disc nucleus space, wherein said length of natural tissue has a first, straightened configuration and a second, folded configuration, wherein said first, straightened configuration presents a first cross-sectional size and said second, folded configuration presents a second cross-sectional size, wherein said first cross-sectional size is smaller than said second cross-sectional size; wherein said device additionally comprises a drawstring effective for folding said length of natural tissue to its second, folded configuration after implantation of the tissue in a disc nucleus space.

17. (Original) The method of claim 16 wherein said natural tissue comprises a biological tissue or a matrix derived from a biological tissue.

18. (Original) The method of claim 16 wherein said natural tissue comprises pericardium tissue.

19. (Original) The method of claim 16 wherein said natural tissue comprises small intestine submucosa.

20. (Withdrawn) The method of claim 16 wherein said intervertebral disc device comprises a plurality of layers of the natural tissue.

21. (Withdrawn) The method of claim 20 wherein the plurality of layers has a form selected from the group consisting of a roll, a plurality of stacked sheets, and a folded-over single sheet.

22. (Withdrawn) The method of claim 16 wherein said intervertebral disc device further comprises a securement mechanism for affixing together at least a portion of at least two of the plurality of layers.

23. (Withdrawn) The method of claim 22 wherein the securement mechanism comprises a mechanism selected from the group consisting of a suture, a staple, etc.

24. (Withdrawn) The method of claim 16 wherein said intervertebral disc device comprises a plurality of sub-units.

25. (Withdrawn) The method of claim 24, and further comprising at least one securement mechanism for movably interconnecting the plurality of sub-units.

26. (Withdrawn) The method of claim 25 wherein the securement mechanism comprises a mechanism selected from the group consisting of a suture, a staple, a sheet, a strip.

27. (Original) The method of claim 16 wherein said intervertebral disc device comprises braided natural tissue.

28. (Withdrawn) The method of claim 27 wherein said intervertebral disc device comprises a plurality of sub-units of a natural tissue having a configuration sized for positioning within an intervertebral disc; and at least one securement mechanism for interconnecting the plurality of sub-units.

29. (Withdrawn) The method of claim 16 wherein said intervertebral disc device comprises a series of relatively narrow plug segments that may be folded together to provide a relatively wider plug of tissue.

30. (Withdrawn) The method of claim 17 wherein said series of relatively narrow plug segments are held together by a retaining clip when folded together to form a relatively wider plug of tissue.

31-33. (Cancelled)

34. (Currently Amended) The structure of claim ~~31~~ 12 wherein the braided natural tissue comprises at least three strands of braided tissue.

35. (Currently Amended) The structure of claim ~~34~~ 12 wherein the braided natural tissue additionally comprises means for attaching the structure to bone.

36-37. (Cancelled)

38. (Currently Amended) The device of claim ~~36~~ 1 wherein said drawstring is attached to said length of braided natural material in a manner to facilitate folding the device to a second, folded configuration having at least two folds.

39-41. (Cancelled)

42. (Currently Amended) A device for augmenting, repairing or replacing an intervertebral disc nucleus, said device comprising: (a) a braided natural tissue implant having a first end and a second end; and (b) a drawstring secured near the first end of said braided tissue implant and passing through said implant at a multiplicity of sites from the first end to the second end; wherein said drawstring is effective for folding said braided natural tissue to a folded configuration after implantation of the tissue in a disc nucleus space;

wherein said implant defines a first, straightened configuration in which the implant has a length-to-width ratio of at least 5:1 when said drawstring has an effective length approximately equal to the length of the straightened natural tissue, and

wherein said implant defines a second, folded configuration in which the implant has a length-to-width ratio of less than 5:1 when said drawstring has an effective length less than the length of the straightened natural tissue,

43. (Original) The device of claim 42 wherein the natural tissue comprises braided pericardium tissue.

44. (Original) The device of claim 42 wherein the natural tissue comprises braided small intestine submucosa.

45. (Original) The device of claim 42 wherein said drawstring passes through the braided implant at a multiplicity of sites throughout the length of the implant, with said multiplicity being at least three sites.

46. (Original) The device of claim 45 wherein said drawstring passes through at least five sites.

47. (Original) The device of claim 46 wherein said drawstring passes through at least ten sites.

48. (Currently Amended) A method of augmenting, repairing or replacing an intervertebral disc nucleus, said method comprising:

(a) providing a braided natural tissue implant having a first end, a second end, and a drawstring, wherein said drawstring is secured near the first end of said braided tissue implant and passes through the implant at a multiplicity of sites from the first end to the second end, and wherein said implant defines a first, straightened configuration in which the implant has a length-to-width ratio of at least 5:1 when said drawstring has an effective length approximately equal to the length of the straightened natural tissue;

(b) implanting said straightened implant into an intervertebral disc space; and

(c) manipulating said drawstring to cause ~~causing~~ said braided tissue implant to assume a second, folded configuration in which the implant has a length-to-width ratio of less than 5:1, said causing being accomplished by reducing the effective length of said drawstring.